

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Jon Opsal et al.

Application No.: NEW

Filed: HEREWITH

For: CRITICAL DIMENSION ANALYSIS
WITH SIMULTANEOUS MULTIPLE
ANGLE OF INCIDENCE
MEASUREMENTS

Group Art Unit: Unknown

Examiner: Unknown

**INFORMATION DISCLOSURE
STATEMENT**

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San Francisco, CA 94105
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M/S PATENT APPLICATION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Applicant(s) submit(s) herewith patents, publications or other information [attached hereto and listed on the attached Form PTO-1449 (modified)] of which they are aware, which they believe(s) may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement:

- (a) ☒ accompanies the new patent application submitted herewith. 37 CFR § 1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.
- (c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits, or before a first office action after filing a Request for Continued Examination under §1.114.
- (d) ☐ is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a

Atty Docket No.: TWI-12030

notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180) set forth in 37 CFR § 1.17(p) or a certification as specified in 37 CFR § 1.97(e), as checked below.

- (e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and the Issue Fee has not been paid, and is accompanied by the fee (\$130) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR § 1.97(e) may need to be completed.] The undersigned certifies that:

- (f) ☐ Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- (g) ☐ No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 (Modified) is supplied herewith, except as noted below.

Those patent(s) or publication(s) which are marked with an asterisk (*) in the attached form PTO-1449 (Modified) are not supplied because they are (a) either U.S. Patents and this an application filed after June 30, 2003, or (b) were previously cited by or submitted to the Office in a prior application no. 10/150,032, filed May 17, 2003, and application no. 09/818,703, filed March 27, 2001, and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

A concise explanation of relevance of the items listed on form PTO-1449 (Modified) is:

- (k) ☒ not given

- (l) ☐ given for each listed item
- (m) ☐ given for only non-English language listed item(s) [Required]
- (n) ☐ is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

The Examiner is reminded that a "concise explanation of the relevance" of the submitted items "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP § 609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and MPEP § 609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: September 8, 2003

By: 

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Attorneys for Applicant(s)

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>	Docket Number (Optional) TWI-12030	Application Number NEW
	Applicant(s) Jon Opsal et al	
	Filing Date HEREWITH	Group Art Unit Unknown

U.S. PATENT DOCUMENTS

*EXMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	*A	4,200,396	04/29/1980	Kleinknecht et al.	356	636	12/19/1977
	*B	4,408,884	10/11/1983	Kleinknecht et al.	356	496	06/29/1981
	*C	4,999,014	03/12/1991	Gold et al.	356	382	05/04/1989
	*D	5,042,951	08/27/1991	Gold et al.	356	369	09/19/1989
	*E	5,159,412	10/27/1992	Willenborg et al.	356	445	03/15/1991
	*F	5,412,473	05/02/1995	Rosencwaig et al.	356	351	07/16/1993
	*G	5,703,692	12/30/1997	McNeil et al.	356	445	08/03/1995
	*H	5,739,909	04/14/1998	Blayo et al.	356	369	10/10/1995
	*I	5,830,611	11/03/1998	Bishop et al.	430	30	03/05/1992
	*J	5,867,276	02/02/1999	McNeil et al.	356	445	03/07/1997
	*K	5,889,593	03/30/1999	Bareket	356	445	02/26/1997
	*L	5,917,594	06/29/1999	Norton	356	327	04/08/1998
	*M	6,137,570	10/24/2000	Chuang et al.	356	237.5	06/30/1998
	*N	6,429,943	08/06/2002	Opsal et al.	356	625	03/27/2001

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	*O	WO 99/02970	01/21/1999	PCT	G01N	21/21		
	*P	WO 99/45340	09/10/1999	PCT	G01B	11/02		

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	*Q	J. Bao et al., "Specular Spectral Profilometry on Metal Layers," (Seminar Proceedings: Metrology, Inspection, and Process Control for Microlithography XIV) <i>Proceedings of SPIE</i> , Vol. 3998, 2000, pp. 882-892.
	*R	C.J. Raymond et al., "Multi-parameter process metrology using scatterometry," <i>SPIE</i> , Vol. 2638, 1995, pp. 84-93.
	*S	M.R. Murnane et al., "Scatterometry for 0.24 μ m – 0.70 μ m developed photoresist metrology, <i>SPIE</i> , Vol. 2439, 1995, pp. 427-436.
	*T	P.A. Heimann et al., "Optical Etch-Rate Monitoring: Computer Simulation of Reflectance," <i>J. Electrochem. Soc.</i> , Vol. 131, No. 4, April 1984, pp. 881-885.
	*U	P.A. Heimann, "Optical Etch-Rate Monitoring Using Active Device Areas: Lateral Interference Effects," <i>J. Electrochem. Soc.</i> , Vol. 132, No. 8, August 1985, pp. 2003-2006.

Examiner	Date Considered
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include Copy of this form with next communication to applicant.	